

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing ~~a sample urine samples~~ from a subject, ~~wherein the samples are sample is obtained before and after glucose load, or before and after a meal;~~

quantitatively determining the myo-inositol level in ~~a sample the samples~~; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol in the ~~sample samples~~,

wherein a concentration of myo-inositol at [[a]] characteristic ~~value values~~ or higher than [[a]] characteristic ~~value values~~ indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.

2. (Original) The method according to claim 1, wherein the quantitative determination of myo-inositol level in the sample is carried out using an enzyme.

3. (Original) The method according to claim 2, wherein the enzyme is myo-inositol dehydrogenase.

4. (Original) The method according to claim 2 or 3, wherein the quantitative determination of the myo-inositol level using the enzyme is carried out by an enzymatic cycling method.

5. (Previously Presented) The method according to claim 1 or 2, wherein the myo-inositol level is quantitatively determined after elimination of sugars other than myo-inositol in the sample.

6. (Previously Presented) The method according to claim 5, wherein two kinds of kinases are simultaneously used for the reaction of eliminating sugars other than myo-inositol in the sample.

7. (Previously Presented) The quantitative method according to claim 6, wherein said two kinds of kinases are ATP-hexokinase and ADP-hexokinase.

8. (Previously Presented) The quantitative method according to claim 2, wherein thio-NAD is used as a coenzyme at a final concentration of 0.1 mM or more in the reaction of quantitatively determining myo-inositol.

9. (Previously Presented) The quantitative method according to claim 2, wherein thio-NAD is used as a coenzyme at a final concentration of 2 to 10 mM in the reaction of quantitatively determining myo-inositol.

10. – 11. (Cancelled)

12. (Currently Amended) The method according to claim 1 or 2, wherein ~~the sample is urine and~~ the characteristic value is 0 to 20 µg myo-inositol per mg creatinine when measured as an increasing amount of myo-inositol excreted in the urine after 75g glucose load.

13. (Currently Amended) The method according to claim 1 or 2, wherein ~~the sample is urine and~~ the characteristic value is 8 to 12 µg myo-inositol per mg creatinine when measured as an increasing amount of myo-inositol excreted in the urine after 75g glucose load.

14. (Previously Presented) The method according to claim 1 or 2, wherein a glucose level in the sample is quantitatively determined in addition to the myo-inositol level in the sample.

15. - 17. (Cancelled)

18. (Currently Amended) A method of quantitatively and enzymatically determining myo-inositol level in a sample comprising:

obtaining a urine sample before and after glucose load, or before and after a meal; and enzymatically using myo-inositol dehydrogenase in the presence of thio-NAD or NADH, wherein two kinds of kinases are used in combination, to quantitatively and enzymatically determine the myo-inositol level in the samples.

19. (Previously Presented) The method according to claim 18, wherein said two kinds of kinases are ATP-hexokinase and an ADP eliminating agent.

20. (Original) The method of eliminating glucose according to claim 19, wherein the ADP eliminating agent is ADP-hexokinase.

21. - 26. (Cancelled)

27. (Currently Amended) A method of eliminating glucose in a sample urine samples obtained before and after glucose load, or before and after a meal, which comprises:

reacting ATP with glucose in the samplesamples to ~~eovrt~~ convert them to ADP and glucose-6-phosphate; and

reacting the thus obtained ADP with glucose in the samplesamples to ~~eovrt~~ convert them to AMP and glucose-6-phosphate.

28. (Currently Amended) The method of detecting mild impaired glucose tolerance or insulin secretory defect according to claim 1 or 2, wherein the myo-inositol level is quantitatively determined after glucose in the sample is eliminated by a method comprising:

reacting ATP with glucose in the sample to ~~evert~~convert them to ADP and glucose-6-phosphate; and

reacting the thus obtained ADP with glucose in the sample to ~~evert~~convert them to AMP and glucose-6-phosphate.

29. (Cancelled)

30. (New) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing urine samples from a subject, wherein the urine samples are obtained before and after glucose load, or before and after a meal;

quantitatively determining the myo-inositol level in the urine samples; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol in the samples,

wherein an increase in the concentration of myo-inositol in the urine sample obtained after glucose load or after the meal over the concentration of myo-inositol in the urine sample obtained before glucose load or before the meal at a characteristic value or higher than a characteristic value indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.

31. (New) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing a sample from a subject;

quantitatively determining the myo-inositol level and the glucose level in said sample; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol and glucose in the sample,

wherein concentrations of myo-inositol and glucose at characteristic values or higher than characteristic values indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.